0000496 29

CORRES CONTROL
OUTGOING LTR NO

DOE ORDER# 4700.1

95 RF 00980

DIST	LTR	ENC
AMARAL M E		
BURLINGAME A H		
BUSBY W S		
BRANCH D B		
CARNIVAL G J		
DAVIS J G		
ERRERA D W		
FRAY R E		
GEIS J A		
GLOVER W S		
GOLAN P M		
HANNI B J		
HARMAN L K		
HEALY T J		
HEDAHL T		
HILBIG J G		
HUTCHINS N M		
JACKSON D T		
KELL R E		
KUESTER A W		
MARX G E		
McDONALD M M		
McKENNA F G		
MONTROSE J K		
MORGAN R V		
POTTER G L		
PIZZUTO V M		
RISING T L		
SANDLIN N B		
SCHWARTZ J K		
SETLOCK G H		
STEWART D L		
STIGER S G		
TOBIN P M		
VOORHEES G M		
WILSON J M		
M. BUDAY	✓	✓
E. W. CRAMER	✓	✓
M. L. HOGG	X	✓
N. A. HOLSTEEN	✓	✓
E. G. MAST	✓	✓
R. A. RANDALL	✓	✓
R. L. ROBERTS	✓	✓
CORRES CONTROL	X	X
ADMN RECORD/080	✓	✓
TRAFFIC		
PATS/T130G		

CLASSIFICATION

UCNI		
UNCLASSIFIED	✓	✓
CONFIDENTIAL		
SECRET		

AUTHORIZED CLASSIFIER
SIGNATURE
REVIEW WAIVER PER
CLASSIFICATION OFFICE
DATE

DOCUMENT CLASSIFICATION

IN REPLY TO RFP CC NO
N/A

ACTION ITEM STATUS
PARTIAL/OPEN
CLOSED
N/A

TR APPROVALS

ORIG & TYPIST INITIALS
RAR/cb

EG&G ROCKY FLATS

EG&G ROCKY FLATS, INC
ROCKY FLATS PLANT, P O BOX 464 GOLDEN COLORADO 80402 0464 • (303) 966 7000

January 23, 1995

95-RF-60980

ADMIN RECORD

Kurt Muenchow
Environmental Restoration Division
DOE, RFFO

OPERABLE UNIT (OU) 6, CHEMICALS OF CONCERN (COC) TECHNICAL MEMORANDUM (TM) NO 4 - NAH-003-95

Action None required

On December 29, 1994, the Department of Energy, Rocky Flats Field Office (DOE, RFFO) received correspondence from the Environmental Protection Agency (EPA), granting agency approval of the Walnut Creek Drainage (OU6) COC TM NO 4 As stated in EPA's letter, this approval is contingent upon DOE's inclusion of arsenic as a COC in Walnut Creek stream sediments Although EG&G's OU6 Remedial Investigation (RI) staff still are of the opinion that arsenic detected in OU6 sediment samples is derived from natural sources, and not from past RFETS activities, attempts to convince EPA that arsenic is within background levels have been unsuccessful (Attached is the rationale for excluding arsenic as a stream sediment COC, as provided in the DOE response to agency comments on the OU6 COC TM) Therefore, rather than delay the RI schedule further, the OU6 RI staff has accepted EPA's request and are recommending the following process to address the arsenic issue for OU6 sediments

1 Arsenic will be included as a COC in human health risk assessment (HHRA) on stream sediments

2 In the uncertainty section, the HHRA results prepared including arsenic should be compared to a risk assessment prepared excluding arsenic to determine the impacts of including it in the risk calculations

3 Also in the uncertainty section, the results of a risk assessment conducted on the UCL^{95} of arsenic in background sediments should be presented and compared with the OU6 results EG&G staff risk assessors are of the opinion that a HHRA conducted on the UCL^{95} background arsenic values would likely exceed a 10^{-6} risk

4 Additional information on the ubiquitous nature of arsenic in the surface soils of the Front Range of the Rockies and a discussion of RFETS arsenic process sources, if any are found to have existed, will be provided to support conclusions that DOE should not cleanup arsenic in sediments to the exclusion of more important site-related contaminants, such as plutonium and americium

Should you have any questions or concerns regarding this issue, please call me at 966-6987

N A Holsteen
Operable Unit No 6 Closure
Environmental Restoration Program Division

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RAR cb

Orig and 1 cc - K Muenchow

Attachment
As Stated

Comment No 8 on OU6 COC TM The argument presented for eliminating arsenic as a COC in sediment is inconclusive Unless a better case can be made for elimination, it should be retained

Response It is the DOE position that the arguments presented in the text support a conclusion that arsenic in stream sediment is within background (see Attachment 5) and should not be considered a PCOC The argument excluding arsenic as a PCOC in stream sediment is consistent with the arguments excluding manganese and barium in stream sediment,which were not discussed in EPA's comments

Arsenic failed only the Gehan test which shows that the distribution of analytical results for arsenic in stream sediment was statistically different from the distribution of background data However, the maximum concentration of arsenic in stream sediment (5 8 mg/kg) is well below the background maximum of 17 3 mg/kg, and is also below the background $UTL_{99/99}$ (10 mg/kg) and the background mean plus two standard deviations (7 4 mg/kg) Therefore, although the distribution of arsenic in stream sediment is statistically different from background, the maximum concentration is well below other comparison criteria

In addition, surface soil is the most logical source of arsenic in stream sediment since the streams do not receive sediment from other contaminant sources However, arsenic in surface soil was determined not to be statistically different form background Therefore, since the maximum concentration of arsenic in stream sediment is below background comparison criteria and arsenic is not above background in surface soil, which is the largest source of sediment in stream beds, arsenic is excluded from consideration as a COC in stream sediment